



Figure 1

Anopheles gambiae odorant receptor 1 genomic sequence (SEQ ID NO: 9)

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Features:

- 1) Presumed Untranslated 5' and 3' regions are underlined.
 - 2) Potential TATA box transcription initiation signal is double underlined.
 - 10 3) Putative Start (ATG) and Stop (TAA) codons are in BOLD.
 - 4) Introns are tentatively assigned and are shown in lower case.
- Exons are highlighted.

15 AGCTTTGTTTCATTTATGTTGAAATCTAGCCCATTTTGTATAGTGCTGAACGACGAAGAACATACGAAAGTACCTCGT
CCGAACACTATCAACATTAATTATACCAAGCTAGAAGAAGATATTTATAGTCAAGCCTCAACATCATAGGAACTTT
AGCAAAACCATTTAATTTACATGATGATAAGTCCCACCTCTTACCCCAGCACAGGTTTGAGAAGGACGAAAGTATCT
TTACGATAATATTACTCTAAGGTAGTTTTTGAATAAAATAAAAATTTACGTGCAAGTGGTGGCATCGGACATCATTC
GAAAGAATCTACTAAGTCATACACACACCCCAAGACGACCGACGTAGTTTCATCTAGAAAAACGGGTCAGCTCCATC
GAACACGTGACGACATAACTGCGACATGCGTATGGTCAGTTCCTAGTGCACACTGGTTCAGGGCACTACCTT
20 CCGAAGCAGTAGAACCTAATGTATTGGAAATTATTAGGACATACTGCAACATGCATATGGCTAGTTCGGCTGGTACC
AACGATGGCACCAGGACACTATCTGCGGCCTTGTAATACTACTGTAAATCTATACAAAACGGCTTTACCCATACT
TTATCACAAAACGGCAGGTGAGGGCTGGATTGCTTCAAAGCATTAGAAATATATAATTTCAAAGTCCATAATCTCC
TTAAAAGATAGACAaCAGTAGAGAACACATTTAGTGCTCTTTTCGTTTCGAGTTAGTTGCCTTCTCAAGTAAGCGTTT
AATGCTCAATTGTTGTAGATTCGTTGGATGACTCTCGCTACGTGCTATAGTGGTCAATACTTCCAATTAGATTTTCAT
25 AATTAGTTTCCAATTGTCCACGGAAACCCaCAAAAGAAAAAAACTTGTATCTAGGGTGGAATTTTTCGAGAACA
ATTGGACACTTCATATGAAAAAGGACAGCTTTTTCAAAATGTTAAATAAACACCGTTGGATCCTTTgttggatttca
attctccaaattctgcagaataattctgcaattttacaaaactgctcaaccaccaataattccaattaatcatctg
aacattttaaactgataattaagatgagtaattgcttcgtcatcacctaagaaatcgattagtttgataaaaagaa
caaattgaaatacaataaagtccctgaattttattcgaataacggcttgaactcatttatttcaaaaacctttgaga
30 aattcctcgttgaaaattggtctcctatagttctgctaacgggcccacttcaaaagcaagaactaacaatatcataat
tatggtgcaagtaactatcagtagcagtaatcgccattaaaaacttttccctcaatttgcggtcgttaccggctaaa
tacagagcagagtaacgggaagtgatcaacgtcgctattagtagtaacgaggaacgcctccgaagggtgtgtgaagg
accttttcaaattgaaaccaagtactgtttccagttttaaattggatagttataaaatgagccgttcaacgatcggg
catcatttgagtttcatcttcgaggagaaatagatcagtgccactgtttaaccgaaagtaataagctgaacaaact
35 gaaccacggtgggatgctgacgatcgacgggattcgttctggttgagttgctttggttgaaatatttagGCCTAT
GGCCACCGGAAGATACGGATCAGGCAACGCGGAACCGGTACATCGCGTACGGTTGGGCTTTGCGGATCATGTTTCTA
CATCTGTACGCTCTAACGCAAGCCCTATACTTCAAGgATGTGAAGGATATTAATgtgagttcttagtttagctattag
tgttccacctgtccataatctgtcttttattgggttagGACATCGCAAAATGCATTGTTTCGTGCTTATGACTCAAGTGA
CGTTGATCTACAAGCTGGAAAAGTTTAACTACAACATCGCACGGATTTCAGGCTTGTCTGCGCAAGCTTAACTGCACA
40 CTGTATCACCCGAAACAGCGCGAAGAATTTCAGgtaagcctgctgggaaatatgactaaaaagagtgtcaacaaacga
ctctcctccaaatgtagCCCCGTTTTACAATCGATGAGTGGAGTGTGTTTGGCTGATGATCTTTTCTCATGTTTGTGGC
TATCTTCACCATCATCATGTGGGTTATGTGCGCCAGCCTTCGACAATGAACGTCGTCTGCCcGTGCCGGCCTGGTTCC
CGGTGGACTATCACCATTCGGACATAGTGTACGGTGTACTGTTTCTGTATCAAACCATTTGGAATCGTCATGAGCGCA
ACGTACAACCTTCTCGACCGATAACCATGTTTTCCGGCTTGATGCTACACATAAATGGACAAATTGTGCGGCTTGGTAG
45 TATGGTTAAAAAGgtgagttacggcgactacttgctccagtaaggacagggagtttgtttccggttatgatattcatt
ttatcagCTTGACATGACGTCCCTCCCGAACGCCAATTGGTTCGCAACGGATGCGGAATGGAAAGAGATGCGAAAGC
GCATCGACCATCACTCCAAAGTGTACGGTACGATGTACGCTAAAGTAACGGAGTGTGTGCTGTTTCACAAGGACATC
TTAAGgtacgaattgggccaattaattgtgtcatttaaaaagcttgacccaacttttcacagcttcggcgatgaagt
gcaggacattttccaagGATCTATCTTCGCGCAAGTATGCGCGTCTGTAATTATCATTTGTATGACACTGCTGCAAC
50 TACCGGGGgCGATGTTACGATgGCCGATCTGCTGGGCTGTGGGTCTATTTGCTAGTAAaGACATCGCAAGTGTTTA
TTTTCTGTACGTAGGGAATGAAATCTCCTATACgtaggttgacacgtagaggaattaaatgtttggaagaata
tcaataccaaatagtagatgtttcggttacagACGGATAAATTTACAGAGTTTGTGTTGGGTTTTCAACTACTTCAAG
TTCGATAAGCGTACCAGCCAAGCAATGATATTTTTCTGCAAAATgtgagatagcgggtgtatttgtgcagtcagtaca

5 ttaaatacgttctctatttcag GACTGTTAAAGATGTTTACATCAAGGTCCGAAGTGTCTTGAAGGTTACGCTAAAT
CTTTCACACATTTTTCGACgtatgtaattatgctgtggtattttagcttgaaataagctacaaactttgaaagtaattt
caatctgtttttag ATTATGAAGCTATCGTACTCCTATCTGGCCGTACTTCAGAGCATCGAATCAAGTAATCGTG
CTAATATCCCTAATGTTGAAATTATATTTTGTTAGATTTATTGCATAAAGTAaTaTTTAATTTTATACATCAAACGT
AAGCCCGCtaGTTTTCAATTAGCCTTTTCCAAAATTTATCAAATTGATTTTGAATTGATTGCAGAGTTTCAGGAATT
TAATCTGATAGGATATCTTGTTTATCCAATAGAGGTGTGGAAGCGTTCCCAAGCCATTCGTTTGATAGTTTATAGCA
CCGTCGAGCAGTTGATCGCTGTGATCGCTAGGCGCACCTGATTTTATCTTTATCTCGCACCTGTTATGGCAAGGGCG
CTTTTCACACGTTTCACACAATATAATGCACATGTATAATGCATTCTTACTTTAGCATTTTGTGTTACATATAATACC
AAAATTATGCATTTTATTTCTCACGCAACGATTAGAGGATGACTTcACAAAGGTCCATCTAGTGGTAGGAGGTATAC
10 AATTATACCTCTCAAAATCTCACAGCAaATGAGAAACAAAAGGATACCAAGCATACCCTTTTTTTACTTGACAATT
TCATTTGATTTATGTAATAAAGCACTGCaCGTCGACTTCCTAAAA

Figure 1 continued

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Figure 2

Anopheles gambiae odorant receptor 2 genomic sequence (SEQ ID NO: 10)

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Features:

- 1) Presumed Untranslated 5' and 3' regions are underlined.
- 2) Potential TATA box transcription initiation signal is double underlined.
- 10 3) Putative Start (ATG) and Stop (TAA) codons are in **BOLD**.
- 4) Introns are tentatively assigned and are shown in lower case.
- 5) Exons are highlighted.

GGGATCCTCTAGAGTCGACCTGCAGGCATGCAAGCTTCCTCACCGTGACGTGCTAGAAATGGTTCAACATACTCGT
15 CCGGCAGAGCGAAGACGACGAACAGCGGAATGTCCCAGGAAATGTAATGAGATATCACAGCAAGTGAACCCAAACCG
AGCTGTGCGCTTTGTGTTGCGCTTTAAAAATGGCCCTTCCTTCGCCGCATCTGCTTGGTTTTCACACGCTTTCCCAGG
AAATCCACTGACCACTGGCCACACATCAACCACCGAGCGGGAGCCTCAGTGCCCAGCGAAGCATATAATTTGCTCA
AAAAGTCACGGTACTCAATTAATTTGATTATAATCAATTTTCGTGGCTTCCAACACACCCTTCTTCCACAATCCATCG
20 CCGAGTGAGCGAGTATAAAGGTGAAGAAACGTACCTTGCGCTTGCTCACTAACTGAACCGGATTTCAAAAAGGAACA
TAAACCGCAACCCACAGCCGAAAATGCTGATCGAAGAGTGTCCGATAATTCGTTGTCAATGTGCGAGTGTGCGCTGTTG
TGGTCTGATCTGCGCGCGCGCGCGCTTCTCCCGCTTTCTGCTCGCGCTGCAATCCCGCTCGCGCTGCTGAACGTTTTCGA
GTTCTCTGAAGCTGTACTCTCTGCGCGCGACATGAGCGAGCTCATCATCAACCGGATACTTTACCGTGTCTGTAATTTA
ACCTGCTGCTacgtgggcgaggggaggggcaataaccttcccacttgggtggatattttcataccttttccatgtgtt
tttttatttctctgtttgttgccatccagCTCCGAACCTTCCTTTCTCGTGAATCGACCGAATTTGAGACATTTT
25 TTGAAGCGCTTGGCGCGGAGTACCGCTCTCTCGAGgtaagtcattgggtttttctagtttttgggggagttgtttaca
ccataaccacccccgacggtaacatttgatcgtcccgcgaaaatgtttgtacagAAAAATGACGACATCCGACCCCT
GCTGACCCCTACACACCGCGCGGACCGCATGCTATCGATAATCGAATCTGTGCTCGCGCGCTTCATTAGTCCCTGCT
TTGTGACCTATCTCTCTTTCTGCGCGCGCGCGCGCTTACCGTACCGCGCTCAGGATAACCGCGCGTGGACGCTGCTGCGC
ACCGCGACCTACACGCTGCTGTTTGTGCTGACGCTTTACCTTACCTTCCCCCGCTGCTGCTCATGTACATCCCGTTTAC
30 CAGCTTCTACCGGACCTGCAACGCTGTTTGGCGCTGCTTCCACATACCGCGCGCTAAAGCAACCGCTCCGACCCCTTGGCGC
CGCACACCGCGACCATGCTTGGACCGGACACACCGCGCGGACACTGTTCCCGGAGCTGAAGGAGTGTCTAAAGTAT
CACAAACAAATCATCCAGtaagtagacgctagtagactcgaccggattgccccttcctcggggaggggaggtttgct
atttcgggatgcggcagcacgcatacacacaaaccggaagccattaattctcccgttttcatgcccgcacgggact
gggtcatgtttcacatccttcccttcccttccaaacacacacacgcgcgcgtgcacgtacagATATCTTCATGATCTC
35 AACTCACTCGTCAACCATCTGTCTCTGCTGAGTTCCCTGTCTGCTGCGGATGATGCTGTGCGGACCTGCTGTTTCTGCT
AAGCATTTtaagtaaaatcgaccgacgtgcggtcgctagtcctgtctccgactctcatttcgggactcaatcgttcc
atctctcaatagAGCAATCAGCTGGCACAGATGATAATGATTGCGATCGTACATCTTCATGATAGTCTCCGACATGTT
TGGCTTCTATTGCGATCCGAACGAGGTAAGTGGCGCTgaagctgagtttggttgagcggttcgcta
tagatcggctgtcttacattgttggtttctgcatggggatcggttttggttttctctccatttcagAGGCTAGGC
40 ATTGCGGATGCGCATTTACAAATCGACCGCTGCGCGGACTTTGACGAACCGATAAAGGAACCGCTTGAATCTAAATTTG
ACCTGCTCAGCGACCGATGCTGCTAAGtttggtgatcgatgctctgttcaatgaacatggcacagaaggctgtgta
aatagctgttcattaataagttttttcagaatgtatcgtttttagttgatttaaacgcattgttctatgcaatggta
gcaacaatagaccgctttattaatccaagcttcctttaggattgattttttattttaagagaaagataaaccatttt
tagtaaccaatttagttacaggaaccaaatacagaatttattattattattattattattattattattattattatt
45 ttatt
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gttgttgttcttattattgttgttgttattcttattattattattattattattattattattattattattattatt
gttgttgttcttattattgttgttgttattcttattattattattattattattattattattattattattattatt

ttccagtaatccataataaaaaataataaagtaaataaataagtaaataagtaaataattccagtaactgtagtaatac
acaataatctctaagaattaaaattgcatttttgtaatgaaatatgttgattgttcgaatagttcagaaaaacttaaa
aatgcctcagcattaaacagttttgaggttggttcagggcatttagtttagatatttttagtatttttaaagcatttggt
ttcattactacaaaaaagcaaatttatgagtgaattactttcagttcttctaaacgcctatgtgtatgcaattacat
5 aacaatagctctctttttttattgcattttttccttagtaatctaaatccaatctcttctttccctcttgacagATTAAA
GTGGGCAAGGTGTACCCGATGACGTTGGAAATGTTTCAAAAATGGTCAACGGTGTCTACTCGTATTTCACACTGGT
GGGGGAGTGTACAACTAACTTAACCGGTAAACAAACAAAAATCCCCTCATCACTATGCAAAGACAGCAAGCAGCC
GATCATCAAACACCATTAGCAGCCACAAAGTTACCAGCCGCTTATCCACGGGATTTGGTGGAAAGTTATTGCACTG
AAGCTCTTTCACCCAAATTTTCATGGAGGTTCCCTCTCAACCAACCCATTGAAGCGAATAAAAGTATCAGCAACCAG
10 GCGACGGTGAAAAACGCTGCATTATTGTGCTTGCTTCAGCATTCCAGCGAATGACTCTTAACTTTTCCATTCAAA
AGTCGCGATGCTCACGATACGGAGCGGTGTGTTGTTTCGATCCGCCGAGTGCCTCGCAAGCCGGTGATGTTGCCGGT
GGAAATGCACAGATCGACACAGCGATAGATAATCGTTTGTTTCGCGTAAATGGGAGGGAAAAAAGTAAGCTGCCAGCT
ACTTCATTTCCATGTTAATTGAACTCAAGCCAACGAACATGCAGAACCCGGTTGGTTGTGTGTCTCCGCTCCGGGA
AAGTCTCTGTCTCCGGGGCATGGATTCTTTCCCCCTCCGGGTGGTTGGGGGTATTGTTTAGGTTTTTATTTTACAAA
15 TTCATATCCTTCCGCTTCCGCATCAGCCGACCCGGTGGGTGCGCCAGACAGATGTGCGGCGGGCAACAAAACCTATGC
ACGAACATGGCCAACAAACACAGCTTCTATCTCATCTCTGTGTGCGACTGTCTCGCTTTCCCGCTGCGTTGCTTGTA
GTACTATCATTGTTTTAGTCCACGGGTTTACTTCTAATTCATTGCACCACGCAAAAAGGCTCATCCTTTGCTCGTT
CCGGTTGCAACTTCGACAAGCGCATGGTTGGGATACGAACAAAAAACCACTACTCCACCCACTACTACTACTG
CCACCACCACTAACAACACTACACTTGGTTGGGAGCTTGACAGACCCACAAGCAACAACGATACAAGCTAGCTAGCT
20 GCTGTGTGCGCTCGAGTCAGCCGACGGTACAAGGTTTAACCGGTACAAGCAACTCCCGGACCGATCCCAAACTCTG
ACAAGGCACGGGGCCGCATCCGGCAGTACGGTTCGAAAACATGGAAATGTTTAATTAAACTGTAATTGTCAATCGC
TGCTACAAGTTGTGACACAGGGAGAGAGAGAGACAGAGCGCGCCCGATGGTGATGGTGTAAGATAGATACAGGAA
AAGAGCGAGAAACATTGGTACGATTTGGTGTGGTTAGCAAATTTGATTTCCACTGATTTTGAGTGCAAATTTAATGC
ATCGAAAATTTGCCATTACAGGGTAAAGTTGCTCGTGGACGGATCCCCGGGCTGCAGGAATTCGATATCAAGCTTAT
25 CGATACCGTTCGACCTCGAGGGGGGGCCCGGTACCCAGCTTTTGTTCCTTTAGTGGA

Figure 2 continued

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Figure 3

Anopheles gambiae odorant receptor 3 genomic sequence (SEQ ID NO: 11)

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Features:

- 1) Presumed Untranslated 5' and 3' regions are underlined.
- 2) Putative Start (ATG) and Stop (TAA) codons are in **BOLD**.
- 3) Introns are tentatively assigned and are shown in lower case.
- 4) Exons are highlighted.

10

AAGCAGAACACATCAAGAAGCAATTAGGTGTGTCGTACGTTAGCAAGTAGTTCGCGAGGAGGAATAAAATAGATGCC
TTCTGAGCGGCTTCGTCTCATTACTTCCTTCGGAACCTCCTCAAGACAAACGCACGATGGTACTGCCAAAATTAAAGG
ATGAAACAGCAGTGATGCCGTTTCTGCTGCAAATTCAAACCATGCGCGACTGTGGGGTGACCGTTCCAGCGGTAC
15 CGTTTTTATCTCATCTTTTCCTACTTCTGCGCGATGGTGGTTCTACCCAAAGTGCTGTTTCGGTTATCCAGATCTCGA
GGTTGCGGTACGCGGCACGGCCGAGCTGATGTTTGAATCGAACGCATTCTTCGGCATGCTAATGTTTTCTTTCAAC
GCGACAACCTACGAGCGATTGGTGCATCAGCTGCAGGATCTGGCAGCTCTAGgtgagtatgcagccaatcgattgttc
caaaccttcgcaacatccttcgtaacactgctacactttcagTCCTCCAAGACCTACCCACAGAGCTGGGAGAGTAC
CTGATCTCAGTGAACCGACGGGTGATCGGTTCTCCAAAATTTACTGCTGCTGTCACTTTTCCATGGCAACGTTCTT
20 TTGGTTTCATGCCCGTCTGGACGACCTATTCGCGCTACTTTGCTGTGCGCAACAGCAGGAACCGGTGAGCAGGTGT
TGCACCTCGAGGAAGAGCTGTACTTCCTGAACATTCCGACTTCGATGGCGCACTATACGTTTTATGTGGCCATTATG
TGGCCACGATCTATACGCTCGGGTTTACCGGTGGCACAAGCTGCTGACCATTTTCAGCAATGTTAAGTACTGTTT
GGCCATGCTGAAGCTCGTTGCACTCCGAATCCACTGTCTAGCGAGAGTAGCGCAAGACCGAGCGGAAAAGGAGCTGA
ACGAGATTATTTCCATGCATCAGCGGGTACTCAAgtaagtaaattcaaattgaaagttttgcaggaataacttgag
25 tgtgtctgaccctgtcacatcctagCTGCGTGTTCCTGCTGGAGACGACATTCGCTGGGTATTTTTCTGTCAGTTT
ATTGAGTGTACAATGATCTGGTGCAGTCTCATCTCTACATAGCGGTGACGgtaatagcatttttcgtcatttcgtta
gccttattcaatccatttttgtgaacgtgaatttccccagGGGTTCAGCTCGACGGTAGCGAATGTATGTGTCCAG
ATCATTTTGGTGACGGTGGAAACTTACGGCTACGGCTACTTCGGAACAGATCTAACCACGGAGGTGCTTTGGgtacc
ctttggatgaagcttcaaaaagtaattccaaattctgttttgcatttttcccttttccactagAGCTATGGCGTTG
30 CCTCGCCATTTACGATAGCGAGTGGTACAAGTTTTCCATTTGATGCGCGCAAACCTTCGACTGCTACTGCAACGA
TCCCAAAAACCGCTCGGCGTAACGGCGGGAAAGTTTCGCTTCGTCAATGTGGCCAGTTTGGCAAGgtaacattaat
tacagtttgaaaattctgaagaatgcattacttgccttacttgttgttccagATGCTCAAGATGTCCTATTTCATT
TTACGTAGTACTGAAGGAGCAGTTTTAGGAGCTGCTGTTTCCACCTGGAAATGGCCTTTTCGCACTGTCTTCTGT
TTGTTGGACGCACGCAGCACCGAGAGCGCCCTGCACGCACTGACGTATTTTGGCTACTTTGACGTTTGCACCTTTG
35 ACAGCTGAAGGACAGGGTACAATTTTTGCTGCTGTTATTACGCGCAGCGCATTGGATACGAAAACATTGGCCACAAG
TTCTACGATTTTAGCGTTTATTACTGTTTCGTAGCAGCTTTTTTCCaCAATAAACACACACAATAACGTACCGACAG
TATTCTTTTCATTGTAGGATAGAGAAGCCGCCGCGCAGCCAAAACGCGCCGAAAACGAAAGGCGGCACCACCG
GGGGAAAAACACGGGAGCAAAACGAGAACGACGAGTAAACAACAAAACCGGCCGGAACAACAACGGTGCCGGAA
40 ACGA

40

Figure 4

Anopheles gambiae odorant receptor 4 genomic sequence (SEQ ID NO: 12)

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Features:

- 1) Putative Start (ATG) and Stop (TAA) codons are in BOLD.
- 2) Introns are tentatively assigned and are shown in lower case.

10 GGGGAACTCCCCACCCGACCAGACGACGGAAGCTAACGATGTGCAATTGAATAGTCATTAGT
AGCGTTTTTGTCTCGCAAACGAACTAACCCTTTGACTTTTAAAGTTCACTACGGTGAGGACAAAA
TCAATAAATTAAATCGAGACCGTTGATGAGCAAAAGAAAAAAAATATTTTACTGATTTTCATTT
CGTTCCATCGACTACATAATCATAATTATATGCCACATTTTATTATAAGTTTTTGTATCATTTTAA
AACAACACAAAAATGCATCCTTTTCGAATATTAGTCAGGTTGTATCAACAATGAAGTTTGAAGTGT
15 TTCAAAAATATTCTCCCCGGACACGGTCTTATCCTTCGTGCTAAGGCTTTTGCATATCGTGGGC
ATGAATGGGGCAGGATTTTCGGTCGCGAATTCGAGTTGGTGGCATTTTTCTGTTCTATTTAATCTT
TCTTGTAATACCGCCACTAACGGGCGGGTACACCGATGGTCACCAGCGTGTACGCACCAGTGTG
GAATTCCTGTTTAATTGCAATATTTACGGCGGCAGTATGTTCTTTGCCTACGATGTGGCCACTTT
CCAAGCGTTCATCCAGGAACTGAAGAGCCTTTTCGGTTTTTGgtaatatattaattaaattgcgtttattgcat
20 catcatgtttctctttgcagTATGCTCACATTCGTACAGACTAAAGTATAAGCTGACCCGGTTCAACCGTC
GAGCGGATATTATCGCCAAAGTGCAAACGACCTGCATGGGTGCTGTAACGCTTTTCTACTGGAT
TGACCCGATACCTTCCATCTGTGCGCACTACTACAGGTCGACCAATTCCACCGAACCCGTGCGG
TTTGTGCAACATTTAGAGGTGAAGTTCTATTGGCTCGAGAATCGCACCTCAGTCGAGGACTACAT
AACCTTCGTGCTGATCATGCTACCCGTCGTGGTTATGTGTGGTTACGTATGCAATTTGAAGGTGA
25 TGACCATCTGCTGCAGCATTGGACACTGTACACTGTACACCAGGATGACTATAGAGATGGTAGA
GCAGTTGGAAAGCATGGCATCAGCGGAACGAACTGCCAGCGCCATACGCAACGTGGGGCAGAT
GCACAGTGGTTTACTGAAATGCATTAGGCTTTTGAACACGTCAATCCGATCGATGCTGATGCTGC
AGTGGTTGACCTGCGTGTTAAACTGGAGCATTCTCTCATCTATCTAACGAACGTGgtagttttgtctt
gtttggaatccaaaaacaaaagatggctataattgaactttctattacagGGCATCTCGCTACAATCGGTTACCGTGGT
30 GGTAATGTTTTTTCTTGCCACTGCGGAAACTTTCCTGTATTGTTTACTTGGGACGCGGCTTGCGA
CACAACAGCAGCTGCTGGAGCACGCACTCTATGCTACACGGTGGTACAACCTACCCAATAGCCTT
TCGCAGCAGCATTAGGATGATGTTGAGACAGTCGCAAAGGCATGCACACATAACGGTGGGGAAG
TTTTTTCGCGTTAATTTGGAAGAATTTAGCAGGATTGTCAACTTATCCTACTCTGCTTACGTCGT
ACTTAAGGATGTAATAAAGATGGATGTACAGTGAATGTTTTTTTTTTTGGCTTGGCAACGAATGA
35 AGTTTTCCGAATCTATATTAGATCTAGAATTTAATCTAGATGTCATAATATGATCTTGGCCATGA
CCGGTTCCTGGTTTTTGGAAACCAATTCTCAAAACAATTTTGAACCTTAGGGCGAGGCATGAAATGTC
CCAAGAACCTATCCAAGTTCTGGAACCTACATATTACCGAATCTATCCCATTATTGCCTCGGAACT
GGTTTGGTGCTAAATATTTGTCCAAATGTTGGTCCTGGACCTATCCAGACAAAGATCTTCAATTA
TTCCTACCACTGGAACCTGATTAATTGATGTAGGAAGTCATGGAGGTGTTTCAGGGAGAATTTAAA
40 CACTAATGTTCCAACCTCATTATTTCAAGGGCAATTCTATTTTTTATATGCCCTACGGATTGATAC
GTATGTATTACTCCATTTCTGGACTTTGTCTTATTCTTGCTGCTGATTGGACGTGAAATGTTGA
GAAAAAGATTCTTATTTATGAGTGATACAGAGCCTTTAAATACTCCTACGTTGTTTGCTATTTAA
GTATGGCCAGGCTAATCACAATCGCTACTAATGAACAGAATCTCTTCTAATTAAACCCTTTTCGAT
TGATAGTGTCAATGTCAATGTCGAGATAATTGAACGCAACgATACCTACCTTAAACGGAGCAG
45 AACACATCAAGAAGCAATTAGGTGTGTCGTACGTTAGCAAGTAGTTCGCGAGGAGGAATAAAAT
AG

50

Figure 5

ANOPHELES GAMBIAE

Preferred DNA Codons

Amino Acids			Preferred Codons						
Alanine	Ala	A	GCC	GCG	GCT	GCA			
Cysteine	Cys	C	TGC	TGT					
Aspartic acid	Asp	D	GAC	GAT					
Glutamic acid	Glu	E	GAG	GAA					
Phenylalanine	Phe	F	TTC	TTT					
Glycine	Gly	G	GGC	GGT	GGA	GGG			
Histidine	His	H	CAC	CAT					
Isoleucine	Ile	I	ATC	ATT	ATA				
Lysine	Lys	K	AAG	AAA					
Leucine	Leu	L	CTG	CTC	TTG	CTT	CTA	TTA	
Methionine	Met	M	ATG						
Asparagine	Asn	N	AAC	AAT					
Proline	Pro	P	CCG	CCC	CCA	CCT			
Glutamine	Gln	Q	CAG	CAA					
Arginine	Arg	R	CGC	CGG	CGT	CGA	AGA	AGG	
Serine	Ser	S	TCG	AGC	TCC	AGT	TCT	TCA	
Threonine	Thr	T	ACG	ACC	ACT	ACA			
Valine	Val	V	GTG	GTC	GTT	GTA			
Tryptophan	Trp	W	TGG						
Tyrosine	Tyr	Y	TAC	TAT					

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[http://www.kazusa.or.jp/codon/cgi-bin/showcodon.cgi?species=Anopheles+gambiae+\[gbinv\]](http://www.kazusa.or.jp/codon/cgi-bin/showcodon.cgi?species=Anopheles+gambiae+[gbinv])

Figure 6

Name	SEQ ID NO
Arrestin 1 (cDNA)	SEQ ID NO: 1
Arrestin 1 (polypeptide)	SEQ ID NO: 2
Odorant Receptor 1 (cDNA)	SEQ ID NO: 3
Odorant Receptor 1 (polypeptide)	SEQ ID NO: 4
Odorant Receptor 2 (cDNA)	SEQ ID NO: 5
Odorant Receptor 2 (polypeptide)	SEQ ID NO: 6
Odorant Receptor 3 (cDNA)	SEQ ID NO: 7
Odorant Receptor 3 (polypeptide)	SEQ ID NO: 8
Odorant Receptor 4 (cDNA)	SEQ ID NO: 13
Odorant Receptor 4 (polypeptide)	SEQ ID NO: 14
Odorant Receptor 5 (cDNA)	SEQ ID NO: 15
Odorant Receptor 5 (polypeptide)	SEQ ID NO: 16
Odorant Receptor 6 (cDNA)	SEQ ID NO: 17
Odorant Receptor 6 (polypeptide)	SEQ ID NO: 18
Odorant Receptor 7 (cDNA)	SEQ ID NO: 19
Odorant Receptor 7 (polypeptide)	SEQ ID NO: 20

Figure 7

Anopheles gambiae odorant receptor 5 genomic sequence (SEQ ID NO: 21)

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Predicted Exons: *ITALICIZED*, UNDERLINED AND **HIGHLIGHTED**.
Introns: lowercase.

10 tctagacttgaacccatgacgggcattttattgagtcggttcgagttgacgactgtaccacgggaccaccggtttatcactatcactatt
aattaattataatatgctttttagcgatcagcctaccgggttttgtttctctggatatcttaagttcccatttgattatcaagatagaa
caacaacttgtaacctaaataatcattacgtacccttaataacctgtgcatcaaggagttttcgcgaaagcaaaaatccgattgtct
gatgttgcttgcattccatccgattcggttactggttctgcaaaatcgccaataatacggcaatgtccttatcgatgcttgaatcaacat
cacattggttgcatttcggtttttgcgtgcaaatatgttatttgcaaagaaggcaaggtaatgtgcttaagagtaaatacaattcgctg
15 tccattttttgtccaccagtgtgccagaacccgtgccttttagtccttgaatacatccgaccagtcagcaagcaagtgcacATGG
TGCTACCGAAGCTGTCCGAACCGTACGCCGTGATGCCGCTTCTACTACGCCCTGCAGCG
TTTCGTTGGGCTGTGGGGTGAACGACGCTATCGCTACAAGTTCCGGTTGGCATTTTTA
AGCTTCTGTCTGCTAGTAGTTATTCCGAAGGTTGCCTTCGGCTATCCAGATTAGAGAC
AATGGTTCGCGGAACAGCTGAGCTGATTTTCGAATGGAAACGTACTGTTTGGGATGTTG
20 CTGTTTTCTCTCAAGCTAGACGACTATGATGATCTGGTGTACCGGTACAAGGACATATC
AAAGATTGgtgcgtgataatgattgataaaaggaacctttgagcaactcctatccctttcaagCTTTCCGTAAGGAC
GTTCCCTCGCAGATGGGCGACTATCTGGTACGCATCAATCATCGTATCGATCGGTTTTTC
CAAGATCTACTGCTGCAGCCATCTGTGTTTGGCCATCTTCTACTGGGTGGCTCCTTCGT
CCAGCACCTACCTAGCGTACCTGGGGGACGAAACAGATCCGTCCCGGTCCGAACATGT
25 GCTACACCTGGAGGAGGAGCTGTACTGGTTTCACACCCGCGTCTCGCTGGTAGATTAC
TCCATATTCACCGCCATCATGCTGCCTACAATCTTTATGCTAGCGTACTTCGGTGGACT
AAAGCTGCTAACCATCTTCAGCAACGTGAAGTACTGTTCCGGCAATGCTCAGGCTTGTG
GCGATGAGAATCCAGTTCATGGACCGGCTGGACGAGCGCGAAGCGGAAAAGGAACTGA
TCGAAATCATCGTCATGCATCAGAAGGCGCTAAAgtaaggtctgccggtatgttgatagaatacattt
30 ctagctgctttcagATGTGTGGAGCTGTTGGAAATCATCTTTCGGTGGGTTTTTCTGGGACAG
TTCATACAGTGCCTAATGATCTGGTGCAGCTTGGTTCTGTACGTCCCGGTTACGGtaacta
aaagcactgtagtgatctgtctgccacaccattcactgctgtgtcttgtttgtcactcttcccagGGTCTCAGCACAAAAG
CGGCAAAACGTGGGTGTACTGTTTATACTGCTAACAGTGGAAACCTACGGATTCTGCTA
CTTTGGCAGTGATCTTACCTCGGAGGCAAGTTGTTATTCTGCTGAgtttcagttactttccgttcccc
35 tctaaccgtaccattgtaccatttgtttgagacagagcttgagcgtagCACGTGCTGCGTACGGTAGCCTCTGG
TATCGCCGTTCCGGTTTCGATTCAACCGGAAGCTTCCAATGGTACTGCAGCGTGCCGAGA
AACCGGTCCGCATCTCGGCTGGGAAGTTTTGCTTCGTCGACATTGAGCAGTTTGGCAA
TgtatggggagaccttccactgtggcaagaaagattttctttattaatgcatcttttaatttacagATGGCAAAAACATCA
TACTCGTTCTACATCGTTCTGAAGGATCAATTTTAaggggaactccccaccgaccagacgacggaa
40 agctaacgatgtgcaattgaatagtcattagtagcgttttgcctcgcaaacgaactaacctttgactttttaagttcactacggtgag
gacaaaaatcaataaataatcgagaccgttgatgagcaaaaagaaaaaaatattttactgattttcatttcgttccatcgacta
cataatcataattatagccacattttattataagtttttg

Figure 8

Anopheles gambiae odorant receptor 6 partial genomic sequence (SEQ ID NO: 22)

- 5 These are the predicted last three exons of another candidate *Anopheles gambiae* odorant receptor.

Predicted Exons: *ITALICIZED*, UNDERLINED AND **HIGHLIGHTED**.
Introns: lowercase.

10

15

20

25

aacacccatcttatcggcaaaattagtagtattaccggttgaaagcggttccttctggctgtttctcactctctctctctgtctcttta
ttgatgccgtatgcgccgctgctataggctagTTATGCTTACCGGATGTTGCGATCGCGCACGTGCTTT
TCCGCATACGCCAGTGCACACTTGATGGCGGTGGTGATGACGTCTGCTGCGCACCGTT
TTCTGCTCGTGAGTCAGACCTTTTCATTTCCCTGCAATATCCTGTTTCTTTCCCGACCCC
ACAGACGGTTAGACGGATATATGCTGGTAAAGTTTGTCTCTTCATGCTGTGCTTTCTG
ATCGAGCTGCTGATGCTGTGTGCGTACGGTGAGGATATTGTGGAATCCgtaaggcaccaggc
ggtgatgagcgagtcgcgagtaattgaagcttttgcttttaaaacacatcagagCCTTGGGGTGATTGATGCCGCT
TACGGTTGCCAATGGTACCGGGAAGGGTCCGTGGCGTTCCATCGATCCGTGCTGCAAA
TTATACACCGCAGCCAGCAGTCCGTCATACTGACCGCATGGAAAATTTGGGCCCATCCAA
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ATCCTGCAAGCTTCCTGGTCCTACTTTACCTCCTGAAGACCGTCTACGGGAATAAgtaa
gcgcgagagagagagagagagcagtagtgcgttcacccttggtatgaatcaatagatttctaatcatgaaccattgaaaaatgaatca
acattttcgttagttgcacaatattgtaccattctatacagcttcaccacgaccaagcgtttgttgcacaggaacaaacacgtttcga
caagccgcgtcacctgctggc

Figure 9

Anopheles gambiae odorant receptor 7 genomic sequence (SEQ ID NO: 23)

5

Features

1. Predicted Exons (7): ALL CAPS, ITALICIZED, UNDERLINED,
HIGHLIGHTED

2. Introns (6): lowercase

10 3. 5' and 3' sequences: lowercase, dotted underlined

ccgccgggcaggtgacttacgcggtctgacttgctggtgcgctgctttgtacggcaaacggctacacaagcgaatcgaattatcccc
tatcacgctgcgcttaccagcgctgctggtaggcaaagaatgtgcaaagtttcatttggcttggttcgtctgctttgctgtgaacgtgt
15 gcacggttgcatcgctaaggtttcggtgtgagccgagaagttgcagatcgaaatctctttgtgtgtgtgtgtgtgtgtgcagtgggaa
gcattgtgttttagtgagaagtgaagaaaagtgctgaaaaatgcaagtcagccgaccaagtacgtcgcccttcgttgcggacct
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tcctggtggacgctcgcccATGGTGCTGATCCAGTTCTTCGCCATCCTCGGCAACCTGGCGACGA
ACGCGGACGACGTGAACGAGCTGACCGCCAAACAGATCACGACCCCTGTTCTTCACGCA
20 CTCGGTCACCAAGTTCATCTACTTTGCGGTCAACTCGGAGAACTTCTACCGGACGCTC
GCCATCTGGAACGAGACCAACACGCAACCGCTGTTTGCCGAATCGGACGCCCCGGTACC
ATTCGATTGCGCTCGCCAAGATGCGGAAGCTGCTGGTGCTGGTGATGGCCACCACCGT
CCTGTCGGTTGTCCGgtatgtgtgtatgtgtgtggcgtttgggaaagtgtctttgcggcagaacccaatctactgttacgc
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25 acatcgcaggcagagagtttgggtttgatttatcacgcacaccgaatatcttcacggttcataagcttcacgcggtgaaaaggga
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CGTGGAATGCAATGAGCGGACCGGCGTACATTTTCTCTTTCATCTACCAGGTACGTTG
30 GCGGAATgtcctgcgcgtcacagttggcagtcagtgagcggcaacacggcgaaaaaatgggactaaaaccggtcttcacaga
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45 tcggcgggcgccctcatccccagttttgcgccaccaatattgccttcattaatctgtaccctcgagcggttagggcccgcgacgagtcct
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[illegible]

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25 ctttctctcgttttgccacgttgagTCTCGTTTCAGCAATCGGAGATACGTACGGTCCCTGCTGCT
GCTACACATGCTGACCTCCACCATCAAGCTGACGCTGCTCGCTACCGGCAACGAAA
ATCGACGGTGTCAACGTGTACGGATTGACCGTAATCGGATATTTGTGCTACGCGTTGG
CTCAGGTTTTCTGTTTTGTCATCTTTGGCAATCGGCTCATCGAGGAGgtacgtgcgctcggcggtg
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35 CTAATTCTATGGTGCTGGTGCAGCTGAAGTAAacagccgtggcccgaaggatgtgttttttgcgtcgttcg
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40 tctttcggcggttttaaccgttgttgataatacacaagaatgataaaaaataaataacaaaatgttaatatgagtaagtacta
aatagagaaatcgtttttagtatgatcatcctccaatcatttgtttgaaattaactttaattttaactcaaatataaccgatgttttact
ttctgtgagaattattgtggaagaacttaattggaagtataattaaattgattgctaactttatgcgtttttcaatttacgaacgctagt
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45 ttcgcatcgagatggaaatgaatgtaccactagaaccgagtgaaatgaattacttttcaacttgcacgcaaaaccattatctaaag
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cagcaaaaaatacatataaaaccttcatcactcaagctgtatcgagccagcggtgggtgtgtttgactgtgctgtgaaagaaaga
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gtaccgcaccgcatccgtaccgataccggaacaaacgggtgtgcgcgaaagaatccgctagcagccccactggcacgggtatttgctt
ttggttctgtgtttttcttccactggtttgggtgcctgggcgaaggctagctcggctactttcccggggccgcaattttctgcagccaag
gcggcgtgctcgtggggccaaaagaat

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Figure 9 continued

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